

Supplementary Information: Joinpoint regression data

A: Joinpoint regression trend analysis data for all CHD admissions in Liverpool between January 2004 and March 2012

Period	Time (Quarters)	Observed Rate	Joinpoint Modelled Trend
4	2004 Q4	1360.08	1387.92
5	2005 Q1	1468.44	1404.04
6	Q2	1380	1420.36
7	Q3	1449.96	1436.88
8	Q4	1490.68	1546.2
9	2006 Q1	1739.36	1663.84
10	Q2	1793.56	1790.44
11	Q3	1878.52	1926.68
12	Q4	1884.36	1904.04
13	2007 Q1	1930.44	1881.68
14	Q2	1861.52	1859.6
15	Q3	1845.2	1837.76
16	Q4	1800.76	1816.2
17	2008 Q1	1820.88	1794.88
18	Q2	1753.88	1773.8
19	Q3	1735.48	1752.96
20	Q4	1728.68	1732.4
21	2009 Q1	1780.08	1765
22	Q2	1815.48	1798.24
23	Q3	1834.16	1832.12
24	Q4	1852.64	1866.6
25	2010 Q1	1879.88	1901.76
26	Q2	1939.04	1937.56
27	Q3	1963.68	1974.04
28	Q4	1943.04	1906.88
29	2011 Q1	1843.2	1842.04
30	Q2	1788.04	1779.36
31	Q3	1759.04	1787.8
32	Q4	1792.32	1796.32
33	2012 Q1	1817.36	1804.88

Estimated Joinpoints

Joinpoint	Estimate	Lower CI	Upper CI
1	7	7	9
2	11	10	13
3	20	13	24
4	27	16	27
5	30	23	30

Annual Percent Change (APC)

Segment	Lower Endpoint	Upper Endpoint	APC	Lower CI	Upper CI
1	4	7	1.2	-2.4	4.9
2	7	11	7.6*	3.8	11.5
3	11	20	-1.2*	-1.9	-0.4
4	20	27	1.9*	0.6	3.1
5	27	30	-3.4	-10.1	3.8
6	30	33	0.5	-3.1	4.2

* = significantly different from 0% rate of change

Test For Number of Joinpoints

Model	Number of Joinpoints	Number of Observations	Number of Parameters	Degrees of Freedom	Sum of Squared Errors	Bayesian Information Criterion
#1	0 Joinpoint(s)	30	2	28	0.1775834	-4.9027658
#2	1 Joinpoint(s)	30	4	26	0.0446991	-6.0555056
#3	2 Joinpoint(s)	30	6	24	0.0354216	-6.0613904
#4	3 Joinpoint(s)	30	8	22	0.0220611	-6.3081505
#5	4 Joinpoint(s)	30	10	20	0.0130818	-6.6040016
#6	5 Joinpoint(s)	30	12	18	0.0096519	-6.6813189

* = selected model

Final Selected Model

5 Joinpoint(s)

B: Joinpoint regression trend analysis data for male CHD admissions in Liverpool between January 2004 and March 2012

Period	Time (Quarters)	Observed Rate	Joinpoint Modelled Trend
4	2004 Q4	1663.56	1705.52
5	2005 Q1	1810.36	1728.8
6	2005 Q2	1722.04	1752.36
7	2005 Q3	1773.24	1776.24
8	2005 Q4	1807.4	1881.84
9	2006 Q1	2079.2	1993.72
10	2006 Q2	2134.92	2112.28
11	2006 Q3	2246.84	2237.88
12	2006 Q4	2292.2	2370.92
13	2007 Q1	2378.76	2325.52
14	2007 Q2	2262.84	2281
15	2007 Q3	2217.12	2237.32
16	2007 Q4	2190.36	2194.48
17	2008 Q1	2214.12	2152.48
18	2008 Q2	2107	2111.24
19	2008 Q3	2041	2070.8
20	2008 Q4	2044.68	2031.16
21	2009 Q1	2081.52	2076.2
22	2009 Q2	2125.4	2122.28
23	2009 Q3	2129.04	2169.32
24	2009 Q4	2224.52	2217.44
25	2010 Q1	2248.32	2266.64
26	2010 Q2	2331.64	2316.92
27	2010 Q3	2297.88	2292.2
28	2010 Q4	2331	2267.76
29	2011 Q1	2237.6	2243.6
30	2011 Q2	2202	2219.68
31	2011 Q3	2126.52	2196.04
32	2011 Q4	2159.92	2172.6
33	2012 Q1	2205	2149.44

Estimated Joinpoints

Joinpoint	Estimate	Lower CI	Upper CI
1	7	7	14
2	12	10	22
3	20	17	27
4	26	23	30

Annual Percent Change (APC)

Segment	Lower Endpoint	Upper Endpoint	APC	Lower CI	Upper CI
1	4	7	1.4	-2.4	5.3
2	7	12	5.9*	3.4	8.5
3	12	20	-1.9*	-2.9	-0.9
4	20	26	2.2*	0.5	4
5	26	33	-1.1*	-2.1	-0.1

* = significantly different from 0% rate of change

Test For Number of Joinpoints

Model	Number of Joinpoints	Number of Observations	Number of Parameters	Degrees of Freedom	Sum of Squared Errors	Bayesian Information Criterion
#1	0 Joinpoint(s)	30	2	28	0.160688	-5.0027413
#2	1 Joinpoint(s)	30	4	26	0.0510979	-5.921716
#3	2 Joinpoint(s)	30	6	24	0.0346614	-6.0830874
#4	3 Joinpoint(s)	30	8	22	0.0182291	-6.4989481
#5	4 Joinpoint(s)	30	10	20	0.0124632	-6.6524435 *
#6	5 Joinpoint(s)	30	12	18	0.0107624	-6.5724118

* = selected model

Final Selected Model

4 Joinpoint(s)

C: Joinpoint regression trend analysis data for female CHD admissions in Liverpool between January 2004 and March 2012

Period	Time (Quarters)	Observed Rate	Joinpoint Modelled Trend
4	2004 Q4	1090.72	1107.16
5	Q1	1166.2	1114.92
6	2005 Q2	1073.24	1122.76
7	Q3	1164.88	1130.68
8	Q4	1209.24	1255.52
9	Q1	1438.08	1394.2
10	2006 Q2	1486.16	1548.16
11	Q3	1551.8	1536.48
12	Q4	1524.68	1524.88
13	Q1	1543.2	1513.36
14	2007 Q2	1516.92	1501.96
15	Q3	1526.88	1490.64
16	Q4	1462.04	1479.4
17	Q1	1470.52	1468.24
18	2008 Q2	1435.84	1457.16
19	Q3	1457.08	1446.16
20	Q4	1442.68	1469.44
21	Q1	1507	1493.12
22	2009 Q2	1534	1517.16
23	Q3	1564.04	1541.6
24	Q4	1520.8	1566.4
25	Q1	1555.8	1591.64
26	2010 Q2	1599.76	1617.24
27	Q3	1674.68	1643.28
28	Q4	1609.48	1574.64
29	Q1	1509.64	1508.88
30	2011 Q2	1439.6	1445.84
31	Q3	1450.32	1460.48
32	Q4	1481.28	1475.28
33	2012 Q1	1489.68	1490.24

Estimated Joinpoints

Joinpoint	Estimate	Lower CI	Upper CI
1	7	7	9
2	10	10	13
3	19	13	24
4	27	16	27
5	30	23	30

Annual Percent Change (APC)

Segment	Lower Endpoint	Upper Endpoint	APC	Lower CI	Upper CI
1	4	7	0.7	-2.7	4.2
2	7	10	11.0*	3.7	18.9
3	10	19	-0.8*	-1.5	0
4	19	27	1.6*	0.7	2.5
5	27	30	-4.2	-10.5	2.6
6	30	33	1	-2.4	4.5

* = significantly different from 0% rate of change

Test For Number of Joinpoints

Model	Number of Joinpoints	Number of Observations	Number of Parameters	Degrees of Freedom	Sum of Squared Errors	Bayesian Information Criterion
#1	0 Joinpoint(s)	30	2	28	0.2193499	-4.6915381
#2	1 Joinpoint(s)	30	4	26	0.0561688	-5.8270977
#3	2 Joinpoint(s)	30	6	24	0.0423014	-5.883894
#4	3 Joinpoint(s)	30	8	22	0.0338982	-5.8786038
#5	4 Joinpoint(s)	30	10	20	0.0202819	-6.1654891
#6	5 Joinpoint(s)	30	12	18	0.0139677	-6.3117261

* = selected model

Final Selected Model
5 Joinpoint(s)

D: Joinpoint regression trend analysis data for all MI admissions in Liverpool between January 2004 and March 2012

Period	Time (Quarters)	Observed Rate	Joinpoint Modelled Trend
4	2004 Q4	251.12	224.72
5	2005 Q1	238	226.64
6	Q2	220.12	228.56
7	Q3	214.12	230.52
8	Q4	210.96	232.48
9	2006 Q1	231.32	234.44
10	Q2	239.76	236.44
11	Q3	240	238.44
12	Q4	245.84	240.48
13	2007 Q1	235.4	242.52
14	Q2	237.6	244.6
15	Q3	241.96	246.68
16	Q4	256.4	248.76
17	2008 Q1	251.36	228.16
18	Q2	215.36	209.28
19	Q3	177.28	191.96
20	Q4	167.84	176.04
21	2009 Q1	167.28	171.24
22	Q2	174.84	166.56
23	Q3	172.48	162
24	Q4	166.16	157.56
25	2010 Q1	154.76	153.24
26	Q2	144.32	149.04
27	Q3	136.96	144.96
28	Q4	142	140.96
29	2011 Q1	133.64	137.12
30	Q2	141.16	133.36
31	Q3	124.88	129.72
32	Q4	125.16	126.16
33	2012 Q1	124.4	122.68

Estimated Joinpoints

Joinpoint	Estimate	Lower CI	Upper CI
1	16	15	18
2	20	19	22

Annual Percent Change (APC)

Segment	Lower Endpoint	Upper Endpoint	APC	Lower CI	Upper CI
1	4	16	0.9*	0	1.7
2	16	20	-8.3*	-14.4	-1.7
3	20	33	-2.7*	-3.4	-2

* = significantly different from 0% rate of change

Test For Number of Joinpoints

Model	Number of Joinpoints	Number of Observations	Number of Parameters	Degrees of Freedom	Sum of Squared Errors	Bayesian Information Criterion
#1	0 Joinpoint(s)	30	2	28	0.3447671	-4.239337
#2	1 Joinpoint(s)	30	4	26	0.1374797	-4.9319834
#3	2 Joinpoint(s)	30	6	24	0.0733659	-5.3332537 *
#4	3 Joinpoint(s)	30	8	22	0.0647343	-5.2316754
#5	4 Joinpoint(s)	30	10	20	0.0607942	-5.0677253
#6	5 Joinpoint(s)	30	12	18	0.0837904	-4.5201547

* = selected model

Final Selected Model

2 Joinpoint(s)

E: Joinpoint regression trend analysis data for male MI admissions in Liverpool between January 2004 and March 2012

Period	Time (Quarters)	Observed Rate	Joinpoint Modelled Trend
4	2004 Q4	341.8	314.84
5	2005 Q1	331.4	317.52
6	Q2	315.24	320.24
7	Q3	312.64	323
8	Q4	300.56	325.76
9	2006 Q1	319.04	328.52
10	Q2	322.24	331.32
11	Q3	328.52	334.16
12	Q4	346.76	337.04
13	2007 Q1	338.56	339.92
14	Q2	342.24	342.8
15	Q3	344.4	345.72
16	Q4	355.8	348.68
17	2008 Q1	335.96	314.6
18	Q2	288.68	283.84
19	Q3	237.32	256.08
20	Q4	222.4	231.04
21	2009 Q1	215.44	226.24
22	Q2	233.2	221.56
23	Q3	234.76	216.96
24	Q4	221.36	212.48
25	2010 Q1	206.52	208.08
26	Q2	202.56	203.76
27	Q3	193.16	199.56
28	Q4	203.12	195.4
29	2011 Q1	187.08	191.36
30	Q2	197.48	187.4
31	Q3	168.28	183.52
32	Q4	177.6	179.72
33	2012 Q1	180.28	176

Estimated Joinpoints

Joinpoint	Estimate	Lower CI	Upper CI
1	16	15	17
2	20	19	22

Annual Percent Change (APC)

Segment	Lower Endpoint	Upper Endpoint	APC	Lower CI	Upper CI
1	4	16	0.9*	0.1	1.6
2	16	20	-9.8*	-15.5	-3.7
3	20	33	-2.1*	-2.7	-1.4

* = significantly different from 0% rate of change

Test For Number of Joinpoints

Model	Number of Joinpoints	Number of Observations	Number of Parameters	Degrees of Freedom	Sum of Squared Errors	Bayesian Information Criterion
#1	0 Joinpoint(s)	30	2	28	0.3447511	-4.2393836
#2	1 Joinpoint(s)	30	4	26	0.1752419	-4.6892922
#3	2 Joinpoint(s)	30	6	24	0.0584975	-5.5597299 *
#4	3 Joinpoint(s)	30	8	22	0.048604	-5.5182611
#5	4 Joinpoint(s)	30	10	20	0.0420249	-5.4369586
#6	5 Joinpoint(s)	30	12	18	0.0668013	-4.746751

* = selected model

Final Selected Model

2 Joinpoint(s)

F: Joinpoint regression trend analysis data for female MI admissions in Liverpool between January 2004 and March 2012

Period	Time (Quarters)	Observed Rate	Joinpoint Modelled Trend
4	2004 Q4	174.44	150.68
5	2005 Q1	158.32	151.04
6	Q2	136	151.4
7	Q3	130.88	151.76
8	Q4	135.56	152.12
9	2006 Q1	159.96	152.52
10	Q2	168.8	152.88
11	Q3	162.96	153.24
12	Q4	156.68	153.6
13	2007 Q1	146.04	153.96
14	Q2	147.6	154.32
15	Q3	152.8	154.72
16	Q4	168.24	155.08 Joinpoint 1
17	2008 Q1	174.44	148.56
18	Q2	148.28	142.28
19	Q3	122.12	136.28
20	Q4	116.8	130.52
21	2009 Q1	121.16	125.04
22	Q2	120.04	119.76
23	Q3	114.48	114.72
24	Q4	116.2	109.88
25	2010 Q1	108.28	105.24
26	Q2	93.84	100.8
27	Q3	87.84	96.56
28	Q4	88.12	92.48
29	2011 Q1	87.48	88.6
30	Q2	92.56	84.84
31	Q3	87.6	81.28
32	Q4	78.92	77.84
33	2012 Q1	74.32	74.56

Estimated Joinpoints

Joinpoint	Estimate	Lower CI	Upper CI
1	16	13	19

Annual Percent Change (APC)

Segment	Lower Endpoint	Upper Endpoint	APC	Lower CI	Upper CI
1	4	16	0.2	-1.2	1.7
2	16	33	-4.2*	-5	-3.4

* = significantly different from 0% rate of change

Test For Number of Joinpoints

Model	Number of Joinpoints	Number of Observations	Number of Parameters	Degrees of Freedom	Sum of Squared Errors	Bayesian Information Criterion
#1	0 Joinpoint(s)	30	2	28	0.4528029	-3.9667492
#2	1 Joinpoint(s)	30	4	26	0.1851368	-4.6343646 *
#3	2 Joinpoint(s)	30	6	24	0.1662321	-4.5153284
#4	3 Joinpoint(s)	30	8	22	0.1626941	-4.3100946
#5	4 Joinpoint(s)	30	10	20	0.1609003	-4.0944354
#6	5 Joinpoint(s)	30	12	18	0.1824625	-3.7419288

* = selected model

Final Selected Model

1 Joinpoint(s)

G: Joinpoint regression trend analysis data for MI admissions in Liverpool between January 2004 and March 2012 in the 10 most deprived wards of Liverpool

Period	Time (Quarters)	Observed Rate	Joinpoint Modelled Trend
4	2004 Q4	323.97	309.68
5	Q1	295.57	296.13
6	2005 Q2	269.28	283.16
7	Q3	251.39	270.76
8	Q4	252.45	258.91 Joinpoint 1
9	Q1	277.69	266.09
10	2006 Q2	286.1	273.47
11	Q3	288.21	281.05
12	Q4	300.83	288.85
13	Q1	303.99	296.86
14	2007 Q2	301.88	305.09
15	Q3	296.62	313.56
16	Q4	311.35	322.25 Joinpoint 2
17	Q1	299.78	285.24
18	2008 Q2	262.96	252.47
19	Q3	199.85	223.47
20	Q4	195.65	197.8 Joinpoint 3
21	Q1	199.85	199.11
22	2009 Q2	215.63	200.44
23	Q3	220.89	201.77
24	Q4	209.32	203.11 Joinpoint 4
25	Q1	187.23	193.4
26	2010 Q2	169.35	184.15
27	Q3	155.67	175.35
28	Q4	170.4	166.96
29	Q1	156.73	158.98
30	2011 Q2	167.25	151.38
31	Q3	143.05	144.14
32	Q4	138.85	137.25
33	2012 Q1	129.38	130.69

Estimated Joinpoints

Joinpoint	Estimate	Lower CI	Upper CI
1	8	8	17
2	16	12	21
3	20	16	25
4	24	20	29

Annual Percent Change (APC)

Segment	Lower Endpoint	Upper Endpoint	APC	Lower CI	Upper CI
1	4	8	-4.4*	-8.2	-0.4
2	8	16	2.8*	1	4.6
3	16	20	-11.5*	-17	-5.6
4	20	24	0.7	-5.6	7.4
5	24	33	-4.8*	-5.9	-3.7

* = significantly different from 0% rate of change

Test For Number of Joinpoints

Model	Number of Joinpoints	Number of Observations	Number of Parameters	Degrees of Freedom	Sum of Squared Errors	Bayesian Information Criterion
#1	0 Joinpoint(s)	30	2	28	0.4752184	-3.9184316
#2	1 Joinpoint(s)	30	4	26	0.2078359	-4.5187106
#3	2 Joinpoint(s)	30	6	24	0.1587246	-4.5615428
#4	3 Joinpoint(s)	30	8	22	0.1214503	-4.6024615
#5	4 Joinpoint(s)	30	10	20	0.0860639	-4.7201297 *
#6	5 Joinpoint(s)	30	12	18	0.0791676	-4.5769064

* = selected model

Final Selected Model

4 Joinpoint(s)

H: Joinpoint regression trend analysis data for MI admissions in Liverpool between January 2004 and March 2012 in the 10 middle socioeconomically-ranked wards of Liverpool

Period	Time (Quarters)	Observed Rate	Joinpoint Modelled Trend
4	2004 Q4	293.84	286.64
5	2005 Q1 Q2 Q3 Q4	292.76	284.16
6		274.48	281.72
7		268	279.28
8		265.84	276.88
9	2006 Q1 Q2 Q3 Q4	276.64	274.48
10		294.92	272.12
11		269.08	269.76
12		269.08	267.44
13	2007 Q1 Q2 Q3 Q4	242.16	265.16
14		258.32	262.84
15		284.16	260.6
16		291.68	258.36
17	2008 Q1 Q2 Q3 Q4	275.56	248.84
18		215.28	239.68
19		201.28	230.84
20		209.88	222.36
21	2009 Q1 Q2 Q3 Q4	213.12	214.16
22		205.6	206.28
23		195.88	198.68
24		199.12	191.36
25	2010 Q1 Q2 Q3 Q4	191.6	184.32
26		179.76	177.52
27		166.84	171
28		166.84	164.72
29	2011 Q1 Q2 Q3 Q4	159.32	158.64
30		156.08	152.8
31		133.48	147.16
32		137.76	141.76
33	2012 Q1	151.76	136.52

Estimated Joinpoints

Joinpoint	Estimate	Lower CI	Upper CI
1	16	12	18

Annual Percent Change (APC)

Segment	Lower Endpoint	Upper Endpoint	APC	Lower CI	Upper CI
1	4	16	-0.9	-1.9	0.2
2	16	33	-3.7*	-4.3	-3.1

* = significantly different from 0% rate of change

Test For Number of Joinpoints

Model	Number of Joinpoints	Number of Observations	Number of Parameters	Degrees of Freedom	Sum of Squared Errors	Bayesian Information Criterion
#1	0 Joinpoint(s)	30	2	28	0.220956	-4.6842427
#2	1 Joinpoint(s)	30	4	26	0.1131469	-5.1267723 *
#3	2 Joinpoint(s)	30	6	24	0.1005679	-5.0178798
#4	3 Joinpoint(s)	30	8	22	0.0900131	-4.9020117
#5	4 Joinpoint(s)	30	10	20	0.0813158	-4.7768801
#6	5 Joinpoint(s)	30	12	18	0.0764994	-4.6111912

* = selected model

Final Selected Model

1 Joinpoint(s)

I: Joinpoint regression trend analysis data for MI admissions in Liverpool between January 2004 and March 2012 in the 10 most affluent wards of Liverpool

Period	Time (Quarters)	Observed Rate	Joinpoint Modelled Trend	
4	2004 Q4	227.52	201.08	
5	2005 Q1	214.12	202.6	
6	Q2	180.68	204.12	
7	Q3	180.68	205.64	
8	Q4	176.2	207.16	
9	2006 Q1	223.08	208.72	
10	Q2	226.4	210.28	
11	Q3	233.12	211.84	
12	Q4	228.64	213.44	
13	2007 Q1	216.36	215.04	
14	Q2	214.12	216.64	
15	Q3	203	218.24	
16	Q4	221.96	219.88	
17	2008 Q1	233.12	221.52	Joinpoint 1
18	Q2	224.16	207.96	
19	Q3	185.16	195.2	
20	Q4	163.96	183.24	
21	2009 Q1	155.04	172.04	Joinpoint 2
22	Q2	171.76	161.48	
23	Q3	160.6	151.6	
24	Q4	148.32	142.32	
25	2010 Q1	130.48	133.6	Joinpoint 2
26	Q2	123.8	125.4	
27	Q3	124.92	125.96	
28	Q4	126.04	126.52	
29	2011 Q1	121.56	127.08	Joinpoint 2
30	Q2	137.2	127.64	
31	Q3	134.96	128.2	
32	Q4	133.84	128.76	
33	2012 Q1	118.24	129.32	

Estimated Joinpoints

Joinpoint	Estimate	Lower CI	Upper CI
1	17	13	19
2	26	20	29

Annual Percent Change (APC)

Segment	Lower Endpoint	Upper Endpoint	APC	Lower CI	Upper CI
1	4	17	0.7	-0.6	2.1
2	17	26	-6.1*	-8.7	-3.5
3	26	33	0.4	-2.9	3.9

* = significantly different from 0% rate of change

Test For Number of Joinpoints

Model	Number of Joinpoints	Number of Observations	Number of Parameters	Degrees of Freedom	Sum of Squared Errors	Bayesian Information Criterion
#1	0 Joinpoint(s)	30	2	28	0.5123481	-3.843202
#2	1 Joinpoint(s)	30	4	26	0.2820797	-4.21327
#3	2 Joinpoint(s)	30	6	24	0.1686568	-4.5008475 *
#4	3 Joinpoint(s)	30	8	22	0.1608549	-4.321464
#5	4 Joinpoint(s)	30	10	20	0.1280593	-4.3227271
#6	5 Joinpoint(s)	30	12	18	0.1257466	-4.1142046

* = selected model

Final Selected Model

2 Joinpoint(s)